

**GENERAL  
JAMES H. DOOLITTLE**



**GENERAL  
JAMES H. DOOLITTLE  
LEARNING PACKET**

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## INTRODUCTION

Since World War II, there has been a need to provide classroom teachers with materials to aid them in teaching about the aerospace world. One area needing such materials is the study of aerospace personalities—the people who moved us from Kitty Hawk to the Sea of Tranquility and beyond. The feats of individuals that have made history in this or any other field are often, at best, misunderstood and then soon ignored or forgotten after the first notoriety has been achieved.

This learning packet contains information about General James “Jimmy” Harold Doolittle. He is best known for his World War II accomplishments, including the famous “Tokyo Raid” for which he was given the Medal of Honor. He was commander of the 12th Air Force in Africa, the 15th Air Force in Italy, and the 8th Air Force in England and the Pacific Theater. He also made many other noteworthy contributions to aviation, including the following:

1. He was the nation’s first professional engineering test pilot.
2. He achieved numerous engineering accomplishments in the field of aircraft racing.
3. He was instrumental in research leading to the development of 100-octane aviation gasoline.
4. He laid the ground work for today’s instrument flying by his “blind flying” research.
5. He demonstrated and promoted U.S. aircraft in South America, Asia, and Europe.

Jimmy Doolittle is an example of the “American hero.” He continues today to be one of our nation’s most active advocates of a strong aerospace effort.

Understanding any subject requires a knowledge of the terminology associated with the subject. A background of the subject’s origin and subsequent development also is required. This packet on General Doolittle provides information in narrative form, and students will experience reinforcement of their knowledge as they complete the various task cards and study the accompanying posters. When used as a visual display, the posters will capture the student’s attention and will provide information and motivation as they complete the task cards.

We have compiled this packet to include posters (artwork) and a booklet to assist the teacher. This booklet includes a recommended teaching method and a short text that covers the life of Jimmy Doolittle. Also, there are a materials list, a test with a test key, a student record sheet, student task cards, suggestions for evaluating student activities, an aerospace education achievement award, and sheets of reproducible art.

The recommended teaching method gives a list of steps you can take to guide your students down the path toward successful completion of the entire learning packet. You, of course, may diverge from the path any way you see fit. Use your academic discretion to arrive at the desired learning outcome. The materials list tells you what is required to complete each of the tasks. This list will allow you to gather all the materials necessary for the activities.

There is a test with a test key included in this booklet. If you wish, you may use this evaluation tool as a pretest before the students begin work on their first task. After all tasks have been finished, it may be used again as a posttest to identify gained knowledge. If you use the test, a block is provided on the student record sheet for the scores and dates administered.

The student record sheet gives you and your students a record of their progress through the packet. Students will enter start and finish dates for each of the tasks and will, in return, expect your initialed acceptance of that work in the block provided for your initials plus any comments necessary.

The task cards are designed for study and activities. Each card provides information and instructions for completing a related activity. There are 20 task cards. Subjects covered in the task cards include mathematics, language, spelling, reading, values clarification, health, geography, science, art, and music.

A list of suggestions is provided which you may find useful in evaluating the work done by your students as they progress through the tasks.

The blank aerospace education achievement award may be copied on the school duplicating machine for presenting to your students.

Sheets of reproducible art are provided for use as transparencies or as handouts.

## TEACHING METHOD

### PREPARATION

- Cut each task card along the dashed line and glue to a piece of card stock.
  - A student may accomplish this job.
  - The cards will last longer if they are laminated in plastic.
- Provide materials and supplies in a designated place.
  - Materials list is included.
- Display the enclosed posters (artwork) on a bulletin board where they will be visible and can serve as a source of information.
- Make two tagboard packets and label them SELECT and FINISHED.
  - With this organization, there is less chance of loss. Also, you can quickly see if the cards are being used.
- Write or type the following directions on a 3 x 5 card and tack it between the two tagboard packets.

<p style="text-align: center;"><b>DIRECTIONS</b></p> <ol style="list-style-type: none"><li>1. Take a task card from the SELECT packet.</li><li>2. Enter the date on your record sheet when you start the task.</li></ol> <p style="text-align: center;"><b>AFTER YOU HAVE FINISHED EACH TASK</b></p> <ol style="list-style-type: none"><li>1. Enter the date on your record sheet.</li><li>2. Place your work in your folder.</li><li>3. Place the task card in the FINISHED packet.</li></ol>
--

- Prepare a personalized folder for each student.
  - Duplicate a copy of the student record sheet for each student.
- 

### PRESENTATION

- Introduce the bulletin board materials.
  - Explain the information that is provided as part of the display.
- Instruct the students on:
  - The text.
  - How to use the task cards.
  - Where the materials are located.
- Instruct the students to select the task cards in the order of their choice, or assign task cards yourself.

- Hand out personalized folders and copies of student's record sheets.

- Explain how to fill out the record sheets.
  - Assign a location for the folders.

- Administer the pretest before the students begin their activities.

- The test key is included.
  - Record the scores on the students' record sheets.

- Tell students when you will meet again.

*NOTE: If small groups will be doing the tasks, it is beneficial to have heterogeneous groups with a stronger reader assigned to a weaker reader.*

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## EVALUATION

- Have students bring in their folders during individualized instruction or reading time, conference time, or at some other acceptable time.

- Go over assignments and initial students' record sheets.

- Unacceptable work should be returned for reaccomplishment, completion, or proofreading. Make appropriate comments on the students' record sheets.

- Meet with small groups to evaluate and schedule future plans (skits, etc.). The folder should be initialed when acceptable.

- Students may monitor and accept assignments but only with your permission.

- Administer the posttest and record the scores on the students' record sheets.

- Award a copy of the Aerospace Education Achievement Award to students who have satisfactorily completed the activities given on the task cards and who have shown a gain in knowledge about General James H. Doolittle.

## **JAMES DOOLITTLE'S BACKGROUND**

### **LEARNING TO FLY**

James Harold Doolittle, known as "Jimmy," was the only child of Frank and Rosa Shepard Doolittle. He was born December 14, 1896, in Alameda, California. The Doolittle family moved to Alaska when Jimmy was just a toddler. Jimmy's father was a carpenter. They lived in Alaska until Jimmy was nearly twelve years old. At that time, Alaska was considered a "roughneck area" and being all boy, Jimmy readily adapted to his environment. Since there was no opportunity for him to further his education in Alaska, he and his mother moved to Los Angeles, California. His father remained in Alaska to earn money the family needed.

Jimmy entered Manual Arts School in Los Angeles. He was an average student and was mainly interested in things he could do using his hands. Some of his time was occupied by boxing and some by just plain fighting. He entered junior college in the fall but soon transferred to the University of California to study mining engineering. He was twenty and had completed three years of college when the United States entered World War I. In 1917, Jimmy enlisted in the Aviation Section U.S. Signal Corps. Within two weeks, he was ordered to report for aviation ground training at the University of California.

After completing ground training, Jimmy Doolittle was sent to Rockwell Field in San Diego for flight training. He soloed after only six hours of dual instruction in the JN-4 and received his commission as a second lieutenant in 1918. From then until 1922, Jimmy had various assignments including pursuit and gunnery instructor, flying border patrol, and participating in General Mitchell's famous bombardment of the former German warships Franklin and Ostfriesland.

### **FLYING RECORDS**

In 1922, Jimmy made the first coast-to-coast flight in less than 24 hours. Flying a DH-4, he took off from Pablo Beach, Florida, refueled in San Antonio, and flew on to San Diego. Following this flight, he was assigned to the Air Corps Engineering School. By late 1923, he had completed most of the courses offered, so he was sent to the Massachusetts Institute of Technology (MIT) as one of six Army men who were to do postgraduate work in aeronautical engineering. In the spring of 1924, he finished the requirements for a masters degree in aeronautical engineering and went to McCook Field for two months to flight test new Army aircraft. He later returned to MIT and finished the requirements for his doctor of science degree in aeronautical engineering.

On October 27, 1925, Jimmy won the Schneider Trophy in a pontoon-equipped Curtiss R3C-2. His average speed was 232.57 miles per hour. Believing he could better his time and set a new seaplane speed record on a straightaway course, Jimmy requested and was given permission to try. He set a new record of 247.17 miles per hour. He also was awarded the Mackay Trophy for his exploits in flight in 1925. In 1926, Jimmy was "loaned" to the Curtiss Company to go to Chile and help Curtiss with its campaign to sell airplanes to South American countries. He continued his demonstrations in Bolivia and Argentina, and his flight from Chile to Argentina was the first to cross the Andes Mountains.

In 1928, Harry Guggenheim and Jerry Land opened the Full Flight Laboratory. They asked for Doolittle to head the lab at Mitchel Field on Long Island to develop and test radio navigation instruments for "blind" flying. Jimmy selected two aircraft for this work, a Consolidated NY-2 and a Corsair 0-2-U-1. Working with Dr. Elmer Ambrose Sperry, a directional gyro and an attitude gyro were installed as flight instruments. These instruments, coupled with a radio directional signal broadcast from the airport, would allow a pilot to control his aircraft without seeing beyond the cockpit. Doolittle made many "blind" landings at night and in fog before the big test. This test took place on September 24, 1929. With Ben Kelsey as passenger and safety pilot, Jimmy took off from Mitchel Field, flew a 15-minute pattern, and landed safely. He was under a light-proof hood that had been affixed to the rear cockpit of the NY-2 and did not see the ground during the entire flight.

### **FLYING AS A CIVILIAN**

In January 1930, Jimmy Doolittle decided to leave military service and work for Shell Oil Company. He was hired as director of the Aviation Department. Shortly after becoming a civilian, Jimmy traveled throughout Europe demonstrating aircraft for the Curtiss-Wright Company. On this trip, he found that the Europeans were making great strides in aviation as a result of government-sponsored air races where new craft could be tried. He also determined that the United States would fall far behind if it did not improve engines, design aircraft for higher speed, and develop better aviation fuel.

Jimmy entered the 1931 Bendix Trophy Race. The race began in Los Angeles and ended at Cleveland. When he landed at Cleveland, he refueled and flew on to New Jersey setting a new transcontinental speed record of 11 hours and 16 minutes. On

October 20, 1931, Jimmy Doolittle flew from Ottawa, via Washington, DC, to Mexico City in 11 hours and 45 minutes—the first flight ever made between three North American capitals. In 1932, to commemorate the 157th anniversary of the United States Post Office, Jimmy agreed to deliver mail by air covering all the routes traversed by George Washington during his lifetime. When the 15-hour and 45-minute flight ended, he had delivered 30 pouches of mail over a 2,600-mile route. He entered the 1932 Thompson Trophy Race, a race flown according to the placement of pylons. He flew a borrowed “Gee Bee” R-1 and won the trophy with an average speed of 252.686 miles per hour. He collected \$4,500 in prize money and also won an additional sum of \$1,575 for having the fastest qualifying speed. After the close of this event, Jimmy announced that he was through with racing.

From 1933 until 1940, Jimmy Doolittle traveled throughout Asia and Europe on business for the Shell Oil and Curtiss Companies. These trips gave him an opportunity to see aviation developments in other countries. He concluded that the United States was lagging behind in aviation, and he gave many speeches attempting to improve aviation in America. During this same time period, Jimmy was instrumental in causing Shell Oil Company to develop 100-octane gasoline which would be necessary for advanced aircraft. This foresight proved correct when, in 1938, the Army Air Corps adopted 100-octane fuel as standard for their aircraft.

## **FLYING IN WAR**

When Jimmy left the Army, he remained in reserve status and had risen to the rank of major. On July 1, 1940, he returned to active duty and was assigned the job of helping manufacturers set up and start producing aircraft. Jimmy Doolittle’s most famous World War II accomplishment was the “Tokyo Raid.” The idea of bombing Japan came from Navy Captain Francis Law. Law’s idea was to use Navy aircraft carriers to place Army bombers close enough to fly over Japan and on to a safe landing elsewhere. The bomber selected was the only one that could do the job—the B-25. The attack was launched April 18, 1942. While the raid did little physical damage to Japan, it had a great psychological impact on the American public. For his part as leader of the raid, Jimmy was promoted to brigadier general and was awarded the Medal of Honor. For the remainder of World War II, Jimmy Doolittle was commander of the 12th Air Force in North Africa (1942), the 15th Air Force in Italy (1943), and the 8th Air Force in England (1944). He and his 8th Air Force moved to the Pacific Theater in 1945.

In 1945, Jimmy returned to the United States from his 8th Air Force Headquarters in Okinawa. He retired from the Air Force as a lieutenant general (three stars)—the highest rank attained by any reserve officer. He returned to Shell Oil Company where he continued helping to improve the company’s products. He also remained on call to what is now the United States Air Force, served on the boards of other organizations, and traveled the country as a speaker. In 1985, the United States Congress promoted Jimmy Doolittle to General (four stars).



## **MATERIALS LIST**

### **TASK**

### **MATERIALS NEEDED**

1. CAREERS	Encyclopedia, career books, paper, and pencil.
2. SPORTS	Encyclopedia, reference books, paper, pencil, sports magazines, scissors, construction paper, and glue.
3. SCIENCE	Encyclopedia, reference books, pencil, and paper.
4. VALUES CLARIFICATION	Paper and pencil.
5. READING	Encyclopedia, reference books, paper, pencil, and dictionary.
6. SOCIAL STUDIES	Encyclopedia, reference books, a map of South America, packet posters, paper, and pencil.
7. SCIENCE	Encyclopedia, reference books, a book of world records, packet posters, paper, and pencil.
8. LANGUAGE	Dictionary, encyclopedia, paper, and pencil.
9. SCIENCE	Dictionary, encyclopedia, reference books, paper, and pencil.
10. SOCIAL STUDIES	World Atlas, packet posters, dictionary, paper, and pencil.
11. SPELLING	Paper and pencil.
12. LANGUAGE	Envelope, paper, and pencil.
13. MATHEMATICS	Paper, pencil, and a time zone reference.
14. SPEAKING	Reference books, paper, and pencil.
15. READING	Dictionary, paper, and pencil.
16. READING	Mystery books, paper, and pencil.
17. GEOGRAPHY	Atlas, packet posters, construction paper, and crayons or colored pencils.
18. ART AND MUSIC	Recipe book, paper, pencil, symphonic records, permanent markers, and pillowcase.
19. MATHEMATICS	String, measuring tape, paper, and pencil.
20. VALUES CLARIFICATION	None.

## TEST

NAME \_\_\_\_\_ DATE \_\_\_\_\_

1. **Jimmy Doolittle was born in 1896. When he was very young, he**
  - a. moved from California to Massachusetts.
  - b. moved from California to Alaska.
  - c. left Alaska for Washington.
  - d. left Alaska for Nevada.
2. **Which of the following *best* describes Jimmy's early interests?**
  - a. Gliders, boxing, and motorcycles.
  - b. Airplanes, wrestling, and books.
  - c. Gold, exercising, and airplanes.
  - d. Books, soccer, and woodcutting.
3. **Jimmy earned his masters and doctorate degrees in**
  - a. education.
  - b. electronics.
  - c. mining engineering.
  - d. aeronautical engineering.
4. **As an adult, Jimmy had careers in**
  - a. mining, boxing, and preaching.
  - b. the Shell Oil Company and rocketry.
  - c. teaching, wrestling, and police work.
  - d. mining, the military, and the Shell Oil Company.
5. **Jimmy Doolittle married Jo Daniels. They**
  - a. were poor all of their lives.
  - b. had two sons and moved often.
  - c. were without children and moved often.
  - d. lived in California and had a large family.
6. **Jimmy Doolittle can be described as all of the following *except* as**
  - a. a college president.
  - b. a daredevil.
  - c. an aviator.
  - d. a miner.
7. **Jimmy Doolittle helped develop engine gasoline that was used in airplanes during**
  - a. World War I.
  - b. World War II.
  - c. the Civil War.
  - d. the Vietnam War.

**8. Jimmy Doolittle would *not* support**

- a. Billy Mitchell.
- b. a separate Air Force.
- c. a strong United States military.
- d. letting other countries move ahead of the United States.

**9. Jimmy flew for**

- a. the Curtiss and Shell Oil Companies.
- b. the United States Army.
- c. the Border Patrol.
- d. all of the above.

**10. Jimmy Doolittle visited the continents of**

- a. Greece, Turkey, and Finland.
- b. Peru, Bolivia, and Argentina.
- c. South America, Europe, and Asia.
- d. North America, South America, and Antarctica.

**11. Jimmy Doolittle**

- a. spent his life setting speed records.
- b. spoke only English.
- c. tested airplanes.
- d. built airplanes.

**12. Jimmy Doolittle is *most* famous for**

- a. his doctor of science degree.
- b. setting speed records.
- c. his “blind” flying.
- d. the “Tokyo Raid.”

**13. The highest rank Jimmy Doolittle received was**

- a. brigadier general.
- b. major general.
- c. lieutenant general.
- d. general.

**14. The “Tokyo Raid” was important because**

- a. most of the enemy’s planes were destroyed.
- b. the Army and Navy worked together.
- c. of the way it made Americans feel.
- d. it won the war.

### TEST KEY

1. b
2. a
3. d
4. d
5. b
6. a
7. b
8. d
9. d
10. c
11. c
12. d
13. d
14. c

### RESOURCES

GLINES, Carroll V. *Daredevil, Aviator, and Scientist*. New York: The MacMillan Company. 1972.

GLINES, Carroll V. *Doolittle's Tokyo Raiders*. New Jersey. 1964.

MANN, Carl. *Lightning in the Sky*. New York: Robert M. McBride & Company. 1943.

REYNOLDS, Quentin. *The Amazing Mr. Doolittle*. New York: Appleton-Century-Crofts, Inc. 1953.

# STUDENT RECORD SHEET

**JIMMY DOOLITTLE**

**BY**

**STUDENT'S NAME**\_\_\_\_\_

	Started	Finished	Comments	Initials
Task 1—CAREERS				
Task 2—SPORTS				
Task 3—SCIENCE				
Task 4—VALUES CLARIFICATION				
Task 5—READING				
Task 6—SOCIAL STUDIES				
Task 7—SCIENCE				
Task 8—LANGUAGE				
Task 9—SCIENCE				
Task 10—SOCIAL STUDIES				
Task 11—SPELLING				
Task 12—LANGUAGE				
Task 13—MATHEMATICS				
Task 14—SPEAKING				
Task 15—READING				
Task 16—READING				
Task 17—GEOGRAPHY				
Task 18—ART AND MUSIC				
Task 19—MATHEMATICS				
Task 20—VALUES CLARIFICATION				

Pretest Score:	Date:	Posttest Score:	Date:
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## STUDENT TASK CARDS

### TASK 1—CAREERS

In high school, Jimmy Doolittle enjoyed classes where he could use his hands. He spent hours in machine shops and in blacksmithing, woodworking, and foundry classes. He built a glider from plans he read about in a magazine. His mother was afraid he'd get hurt, so she bought him a motorcycle to interest him in a different project. He enjoyed working on the motorcycle's engine.

Jimmy attended a junior college and then studied mining engineering at the University of California. He received a bachelor of arts degree from the University of California. He earned a masters and a doctor of science degree in aeronautical engineering from the Massachusetts Institute of Technology.

Using an encyclopedia or library books, research jobs in the mining or aeronautical engineering career fields. Find out the salaries, education required, locations, and working conditions of the jobs. Write a report of at least two paragraphs on your findings.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### TASK 2—SPORTS

Jimmy Doolittle's favorite pastime was sports. He was once the bantamweight amateur boxing champion of the Pacific Coast. Before Jimmy fought in the ring, he got into fistfights. Once the police were called to one of these fights, and Jimmy and his friends found themselves in jail. His mother thought he might learn a lesson if he spent a few days there to think. He learned from that unpleasant experience.

Choose one of the following:

1. Using an encyclopedia or book on boxing, look up the different classes for amateur boxers. List each class and the heaviest weight allowed for that class. Also, list five pieces of equipment used in boxing.
2. Using sports magazines, make a collage. Cut out pictures of boxers and the equipment they use.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### TASK 3—SCIENCE

After his junior year in college, Jimmy Doolittle worked in the Comstock Mine of Virginia City, Nevada. Miners did not like college students because they found the work very hard and would quit. It was demanding work in cramped spaces with bad air. Jimmy's boxing and gym work had developed his muscles and he was a strong worker. After Jimmy had worked at the mine for a while, two men fell down a 2,900-foot shaft. Jimmy went down to check on the men. He found them dead, but the other miners admired his courage and accepted him.

Choose one of the following:

1. Using an encyclopedia or a book on mining, read about surface, underground, or underwater mining. Write a paragraph on one of the methods of mining.
2. Research the following terms: sedimentary, igneous, metamorphic, and mineral. Write the terms as headings on a piece of paper and place the following under the best heading:

chalk  
coal

copper  
diamond

gold  
granite

limestone  
marble

pumice  
salt

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### TASK 4—VALUES CLARIFICATION

Jimmy Doolittle and Jo Daniels were married on Christmas Eve, 1917. Jo paid for the marriage license, and they started their marriage with \$20. A few weeks after the wedding, Jimmy was ordered to report for flight training. He and Jo could not see each other for months at a time. After their two sons were born, Jimmy still had to be away from the family. War, business, and the needs of the country were very important to the Doolittles. The Doolittle family knew they had to share Jimmy.

Form a discussion group of at least two other people. Choose one of the following topics to discuss. Record your final conclusions.

1. How much money should a couple have before they get married and should both people work?
2. List four things each person in a family should try to do for each other.
3. Think of five problems a family may have when the father or mother is gone most of the time and what each person in the family can do to help.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 5—READING**

For a short time in 1920, Jimmy Doolittle flew for the Border Patrol along the Mexico and United States border. Smugglers worked at night so they wouldn't get caught by the pilots. A year later, Jimmy helped General Billy Mitchell demonstrate how airplanes could bomb and sink ships. Jimmy, along with Tooeey Spaatz and Hap Arnold, shared Mitchell's belief that armies and navies were in danger unless the air above them was safe. People in power at the time believed the Atlantic and Pacific Oceans were the best defense for the United States. History has proven them wrong.

There was no Air Force in 1921. Aviators were part of the Army. Jimmy Doolittle thought a strong United States Air Force could help keep peace. It also would stop enemies who might try to attack.

Using an encyclopedia or library books, research the Border Patrol or the United States Air Force. Write a report of at least two paragraphs on your findings.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 6—SOCIAL STUDIES**

Jimmy Doolittle went to South America to help sell airplanes in 1926. The Army loaned him to the Curtiss Company so he could demonstrate what the American plane could do. Germany, Italy, and England also wanted to sell their airplanes. It is important to sell American goods abroad.

Jimmy visited South America twice. He was the first person to fly over the Andes Mountains. He visited Chile, Bolivia, Argentina, Peru, and Paraguay.

Choose one of the following:

1. Using an encyclopedia or library book, find out about trade in the United States. Explain in writing **FREE ENTERPRISE, FREE TRADE, CAPITALISM, AND COMMUNISM**. Give at least one reason why, in your opinion, capitalism is better than communism.
2. Using a geography book, locate all the places Jimmy visited in South America. Make a sketch of South America. Inside your sketch, list the countries he visited and their capitals.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**



## **TASK 7—SCIENCE**

In the early years of aviation, there were many unknowns about flying. Airplanes might come apart in the air or crash for seemingly no apparent reason. Pilots were under great stress. Stress, strain on the heart, and not enough oxygen to the brain were flying problems. Jimmy Doolittle became a test pilot to see how much stress a plane and the human body could take.

Choose one of the following:

1. Using an encyclopedia or health book, research heart and oxygen. Find five facts about your heart and five facts about oxygen. Write a report of at least three paragraphs on your findings. Answer the question of why do pilots need to breathe oxygen when they fly at high altitudes?
2. Using a book of world records, research aircraft speed records which interest you most. Write a report including the dates, names, and some of the records set.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 8—LANGUAGE**

In Argentina, a dinner was given in Jimmy Doolittle's honor. He spoke in Spanish and this pleased the people. Later, after flying over the great jungle of Brazil, Jimmy flew into a dense fog. He saw railroad tracks and followed them. He flew over three different stations with the name "Mictorio." This name was not on his map, and he was running out of gas. He finally reached Rio de Janeiro safely. There he discovered why Mictorio was not on his map. It was on every railroad station, and it meant "Public Restroom."

Choose one of the following:

1. Using a dictionary, write the meaning of semantics, language, etymology, linguistics, slang, and derivations.
2. Using an encyclopedia, write the names of the six living branches of the Indo-European family of language.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 9—SCIENCE**

Centrifugal force has always been a problem for pilots. Jimmy Doolittle flew the world's first outside loop. Naturally, he used a safety belt. Weather is another problem in flying. Fog was a factor which caused crashes in Doolittle's testing days. Jimmy developed and tested instruments for "blind flying" and "blind landings." In September 1929, he flew a test flight with his cockpit completely covered to prevent him from seeing out. All he could see were the controls and instruments of his aircraft. He flew the test safely and aviation took a great single step toward safer flight. The airplane could now be more independent of weather conditions.

Choose one of the following:

1. Using an encyclopedia, look up the term centrifugal force. Write a paragraph on "the importance of wearing seat belts." Try to use the term centrifugal force.
2. Using an aerospace education reference book, research the ways in which a directional gyroscope, an artificial horizon, an altimeter, and radio directional signals would aid Jimmy in a "blind flight."

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 10—SOCIAL STUDIES**

In January of 1930, Jimmy Doolittle left the military service to work for Shell Oil Company. He traveled all over Europe demonstrating aircraft which were using Shell petroleum products. He found that Europeans were ahead of the United States in aviation because their governments sponsored air races where new craft could be tried. Jimmy visited in Greece, Turkey, Bulgaria, Holland, Yugoslavia, Rumania, Czechoslovakia, Switzerland, Norway, Sweden, Hungary, Poland, Belgium, Lithuania, Germany, Latvia, Estonia, Austria, and Finland.

European aircraft manufacturers were interested in high speed as well as the aircraft's performance. Spectators were thrilled by the acrobatics and barnstorming, but spectators don't buy airplanes.

Choose one of the following:

1. Using a World Atlas, locate the countries which Jimmy visited. Draw a map showing the countries still in existence today. Circle the above countries which no longer exist.
2. Pretend you are an American in Europe and you have just seen Jimmy in the Hawk. Write a letter back home to a friend describing what you saw and how you felt.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 11—SPELLING**

Here is a list of places Jimmy Doolittle visited or flew over while working for Shell. Select ten you want to learn to spell. Put a list of your choices in your folder. After you have studied your words, ask a classmate to test you. Be sure to write "Spelling Test" on your paper.

- |                      |                         |
|----------------------|-------------------------|
| 1. Shanghai          | 8. Pennsylvania         |
| 2. Dutch East Indies | 9. New York             |
| 3. Maine             | 10. North Carolina      |
| 4. Rhode Island      | 11. Ohio                |
| 5. Connecticut       | 12. Mexico City, Mexico |
| 6. New Jersey        | 13. Ottawa, Canada      |
| 7. Virginia          | 14. Germany             |

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 12—LANGUAGE**

The U.S. Postal Service was interested in showing that it could be trusted to deliver mail by air. Jimmy and passenger, Ann Madison Washington, retraveled by air the routes George Washington traveled in his lifetime. They dropped thirty mailbags over a 2,600-mile route in 15 hours and 45 minutes.

Choose one of the following:

1. Pretend you lived in Kittery, Maine, and saw Jimmy drop the first pouch. Write a letter to a friend in Wakefield, Virginia, telling what you felt was special about the delivery. Address an envelope.
2. Pretend you are Ann Madison Washington, age 40, and write a one-page story telling how you felt on the trip.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 13—MATHEMATICS**

Businessmen knew that behind Jimmy's record-breaking flights there was planning. Refueling crews worked out shortcuts so he could refuel quickly. Commercial airline executives studied Jimmy's routes and opened new air lanes based on his pioneering flights.

On September 4, 1931, Jimmy Doolittle flew in the Bendix Race. He left Los Angeles at 5:45 a.m. and landed at Cleveland, winning the race. He then flew on to New York City, setting a new transcontinental speed record of 11 hours and 16 minutes. The prize money was \$15,000.

Solve the following:

1. When it was 5:45 a.m. in Los Angeles, what time was it in (a) Albuquerque, (b) Kansas City, and (c) New York City?
2. Jimmy flew 2,440 miles to set the speed record. How many miles did he fly in an hour?
3. Jimmy won \$1,575 for his qualifying speed and \$4,500 in prize money in the Thompson Trophy Race. How much more did he win for the Bendix Race than for the qualifying speed and Thompson Trophy?

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 14—SPEAKING**

"Knock" was an engine problem for scientists in 1920. After hundreds of experiments costing General Motors three million dollars, scientist Thomas Midgley, Jr., developed the chemical tetraethyl lead. (It is a colorless, poisonous, oily liquid.) Jimmy Doolittle helped develop 100-octane gasoline for airplane engines. One hundred octane was needed to get more power from fuel. Without it, our planes would have been outclassed by German and Japanese aircraft in World War II.

Choose one of the following:

1. Organize into groups of five to study environmental pollution. Identify the kinds, causes, and ways to control pollution; and how the engine has caused pollution of our environment. Discuss your findings.
2. Form a debate team of five classmates. One person is to serve as the moderator. Two members are for keeping the engine and two are against keeping the engine.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 15—READING**

Propaganda is important during wars. It also is used by governments during peacetime. The following statements would result in bad propaganda:

The “Tokyo Raiders” were not to bomb the Emperor’s palace.

In Italy, the B-17s were not to bomb the Vatican City.

Codes were used by governments to keep secrets from unfriendly governments. The code which told Doolittle to leave Florida for California was “Tell Jimmy to get on his horse.”

Choose one of the following:

1. Define propaganda. Write a paragraph which would make people think Jimmy Doolittle was wonderful. Write another paragraph making him sound evil.
2. In code, write a short definition for propaganda.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 16—READING**

During World War II, Brigadier General Jimmy Doolittle commanded the 12th Air Force in Africa. In 1943, he organized and commanded the 15th Air Force in Italy, and in 1944, he commanded the 8th Air Force in England. Then in 1945, the 8th Air Force and General Doolittle moved to Okinawa in the Pacific. By this time he was a lieutenant general, the highest rank reached by a reserve officer. General Doolittle found little time to relax during World War II. When he could, he would read a pocketbook edition of a mystery.

While relaxing read a mystery. After completing the book, write a short paragraph telling if General Doolittle would have wanted to read it; be sure to list the book title and author.

NOTE: The United States Congress promoted Lieutenant General Jimmy Doolittle (three stars) to General Jimmy Doolittle (four stars) in 1985.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 17—GEOGRAPHY**

Jimmy Doolittle was born in 1896, eleven days before Christmas, in Alameda, California. His father soon left for the gold rush in Alaska. Mr. Doolittle worked as a carpenter and prospector in Nome, Alaska. As soon as he had enough money, he sent for Jimmy and his mother. Jimmy was one of the smallest boys in his school, but he was light and quick on his feet. When he was about 12, he moved back to Los Angeles, California, to continue his education.

Make a map to show where Jimmy was born, where he lived in Alaska, and where he moved after Alaska. Mark these places with large dots. Sketch in mountain ranges. Show the Pacific Ocean, and mark Sacramento and Juneau with stars.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

### **TASK 18—ART AND MUSIC**

Jo Doolittle, Jimmy's wife, found their life together an adventure. Although they moved often and had to make new friends, they had a happy life. Jo's interests, talents, and hobbies made the Doolittle's home a pleasant place to visit. Jo cared for the children and house, typed Jimmy's classnotes, and attended the symphony. She took lessons in pastry making, learned how to make Mexican dishes, and hand-painted flowers on their china. When special guests visited, she asked them to autograph a tablecloth.

Choose one of the following:

1. Plan a Mexican dinner for six. Include a main dish, vegetables, salad, bread, beverage, and dessert. Plan decorations and two games to play.
2. Find five records of symphonic music. Select two favorites and recommend them to your teacher. Be sure to include why you selected them.
3. Bring an old pillowcase from home. Have your classmates autograph it with a permanent marker. Give it to your teacher.

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 19-MATHEMATICS**

To prepare for the bombing of Tokyo, the B-25 bombers had to take off in 500 feet. The planes had to carry a payload of 2,000 pounds, take off from an aircraft carrier, bomb Japan, and try to land safely in China. Many people thought it was a suicide mission. Jimmy Doolittle didn't.

Write answers to the following problems:

1. Make a piece of string 10 feet long. Measure a distance outdoors until you reach 100 feet. Record your starting and ending points. How many times this distance did Jimmy have for takeoff?
2. There were 16 planes. How many pounds of bombs did they carry all together?
3. Each plane had extra fuel tanks: 646 gallons—main wing; 225 gallons—bomb bay; 160 gallons—in rubber tank in crawlway; 60 gallons in another rubber tank. (a) How much total fuel did they have? (b) If only 1,050 gallons could be used in the engine, how much could not be used?

**PLACE YOUR WORK IN YOUR FOLDER. DATE YOUR RECORD SHEET.**

## **TASK 20—VALUES CLARIFICATION**

Jimmy Doolittle is most famous for his "Tokyo Raid." The bombing damage was small but the effect on the Japanese people was important. They thought they were safe. Their leaders had told them their planes would bomb the United States. The people of the United States were happy to finally have a punch at Japan.

Most of the men who flew the B-25s had bad dreams before the mission. Fear crept into their minds before the flight but left during the mission. When the danger was past, fear returned.

Jimmy Doolittle became a hero. He was promoted to brigadier general and awarded the Medal of Honor.

Choose one of the following:

1. Form a small group of not more than five people. Decide who had the greatest fear—the Japanese or the fliers. Tell why.
2. Form a group of five or less. Decide if fear is something to hide. Be able to tell why.

**REPORT TO YOUR TEACHER OR CLASS. DATE YOUR RECORD SHEET.**

## SUGGESTIONS FOR EVALUATING STUDENT ACTIVITIES

### TASK 1—CAREERS

Check for a paragraph about the salaries, education required, locations, and working conditions of jobs in the mining or aeronautical engineering career fields.

### TASK 2—SPORTS

1. Amateur boxing—10 divisions with maximum weight for each division:

Flyweight	112 pounds
Bantamweight	119 pounds
Featherweight	125 pounds
Lightweight	132 pounds
Light-welterweight	139 pounds
Welterweight	147 pounds
Light-middleweight	156 pounds
Middleweight	165 pounds
Light-heavyweight	178 pounds
Heavyweight	Unlimited

Equipment—Boxing ring; trunks; high, leather soft-soled shoes; gloves; bandages; protective cup; and a fitted rubber mouthpiece.

2. Collage containing pictures of boxers and the equipment they use.

### TASK 3—SCIENCE

1. Paragraph on surface, underground, or underwater mining.

2. SEDIMENTARY	IGNEOUS	METAMORPHIC	MINERAL
coal	granite	marble	diamond
chalk	pumice		gold
limestone			salt
			copper

### TASK 4—VALUES CLARIFICATION

Check group lists or suggestions on family living.

### TASK 5—READING

Check for at least two paragraphs on the Border Patrol or the United States Air Force.

### TASK 6—SOCIAL STUDIES

1. Free Enterprise—the freedom of private businesses to operate competitively for profit with minimal government regulation.

Free Trade—trade between nations or states without protective customs tariffs.

Capitalism—an economic system whereby the means of production and distribution are privately or corporately owned and development is proportionate to increasing accumulation and reinvestment of profits.

Communism—a society whereby all goods are socially owned and all economic activities socially planned and controlled.



Check for one reason why capitalism is better than communism.

2. Check for a sketch of South America with six countries and their capitals.

## **TASK 7—SCIENCE**

1. Check for a report of at least three paragraphs about the heart and oxygen. In answering the question “Why do pilots need to breathe oxygen when they fly at high altitudes?” the following points should be discussed: Oxygen becomes harder to obtain with altitude because the air becomes less and less dense and the total pressure decreases. As the total pressure decreases, so does the partial pressure of oxygen even though the percentage of oxygen in the air remains constant. As altitude increases and the partial pressure of oxygen is reduced, the amount of oxygen transfer in the lung air sacs is reduced which results in a decrease in the percentage of oxygen saturation in the blood. This causes a deficiency of oxygen throughout the body. For this reason, supplemental oxygen, pressurized cabins, and/or pressurized suits are required if the body is to receive adequate oxygen.
2. Check for aircraft speed records.

## **TASK 8—LANGUAGE**

1. Semantics—the study or science of meaning in language forms.

Language—the use by human beings of voice sounds, and often of written symbols that represent these sounds, in organized combinations and patterns to express and communicate thoughts and feelings.

Etymology—the origin and historical development of a linguistic form as shown by determining its basic elements, earliest known use, and changes in form and meaning, tracing its transmission from one language to another, and identifying its cognates in other languages.

Linguistics—the study of the nature and structure of human speech.

Slang—language peculiar to a group.

Derivation—the process by which new words are formed from existing words.

2. Germanic, Italic, Celtic, Slavic, Iranian, and Indic.

## **TASK 9—SCIENCE**

1. Centrifugal force the force on a body in motion that pulls against the center of gravity.

Check for a paragraph on the importance of wearing seat belts.

2. Doolittle steered the airplane by keeping the three instruments (a directional gyroscope; an artificial horizon, the heart of which was another gyroscope; and an altimeter) oriented to a radio beam transmitted from Mitchel Field, New York. The altimeter could measure very slight changes in altitude. To perform his turns, or to fly straight and level, Doolittle watched a miniature airplane in the center of his artificial horizon. When the airplane he was flying moved in one direction, the miniature airplane would make a corresponding move within the instrument. A small horizontal bar on the face of the instrument represented the horizon. It was mounted to a 12-ounce gyroscope which spun at a high rate of speed. To fly straight and level Doolittle aligned the wings of the instrument's little airplane with the artificial horizon bar. To turn, he watched the little airplane move to the desired angle of bank and stopped it when he considered the banking angle sufficient to complete the turn. If his airplane began to dive, the wing of the airplane in the instrument would dip below the horizon bar, and if Doolittle's plane climbed too high the miniature airplane would move above the bar. In order to steer the rectangular course around the field, Doolittle used a second instrument called the directional gyro. He needed the directional gyro because the old floating magnetic compass was slow to return to an accurate heading after the plane had completed a turn. In turbulent air, it bounced around erratically and furnished

only crude or average headings at best. Doolittle had to monitor another instrument, a small vibrating reed, which was giving him radio directions to the field. He watched the instruments very intently because the success or failure of the flight depended on the accuracy of their indications.

#### **TASK 10—SOCIAL STUDIES**

1. Jimmy Doolittle visited Athens, Greece; Ankara, Turkey; Sofia, Bulgaria; Amsterdam, Holland; Belgrade, Yugoslavia; Burcharest, Rumania; Prague, Czechoslovakia; Bern, Switzerland; Oslo, Norway; Stockholm, Sweden; Budapest, Hungary; Warsaw, Poland; Brussels, Belgium; Berlin (E), Bonn (W), Germany; Vienna, Austria; Helsinki, Finland; Lithuania; Latvia; Estonia.
2. Check for a letter to a friend that describes seeing Jimmy in the Hawk.

#### **TASK 11—SPELLING**

1. Check for a list containing spelling words. Evaluate spelling test.

#### **TASK 12—LANGUAGE**

1. Check for letter and envelope.
2. Check for one-page story.

#### **TASK 13—MATHEMATICS**

1. (a) 6:45 a.m.; (b) 7:45 a.m.; (c) 8:45 a.m.
2. Approximately 217 miles.
3.  $\$1,575 + \$4,500 = \$6,075$ .       $\$15,000 - \$6,075 = \$8,925$ .

#### **TASK 14—SPEAKING**

1. Speeches in groups of five.
2. Debate with two teams.

#### **TASK 15—READING**

1. Check for a definition of propaganda and two paragraphs.
2. Check for a definition of propaganda in code.

#### **TASK 16—READING**

Author and title of book with a paragraph on whether Doolittle would want to read the book.

#### **TASK 17—GEOGRAPHY**

Check for student-drawn map of Alameda, California; Nome, Alaska; and Los Angeles, California (mountain ranges, the Pacific Ocean, Sacramento, and Juneau should be indicated on the map.)

#### **TASK 18—ART AND MUSIC**

1. Mexican menu, decorations, and two games.
2. Two favorite records of symphonic music with an explanation for their selection.
3. Autographed pillowcase.

### **TASK 19—MATHEMATICS**

1. Five times.
2.  $2,000 \text{ lbs. per plane} \times 16 \text{ planes} = 32,000 \text{ lbs.}$
3. (a)  $646 + 225 + 160 + 60 = 1,091$  gallons (total fuel);(b)  $1,091 \text{ total} - 1,050 = 41$  gallons not usable.

### **TASK 20—VALUES CLARIFICATION**

Group discussion.

# AEROSPACE EDUCATION ACHIEVEMENT AWARD



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has successfully completed

**THE AEROSPACE EDUCATION LEARNING PACKET ON**  
GENERAL  
**JAMES H. DOOLITTLE**

Given this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_

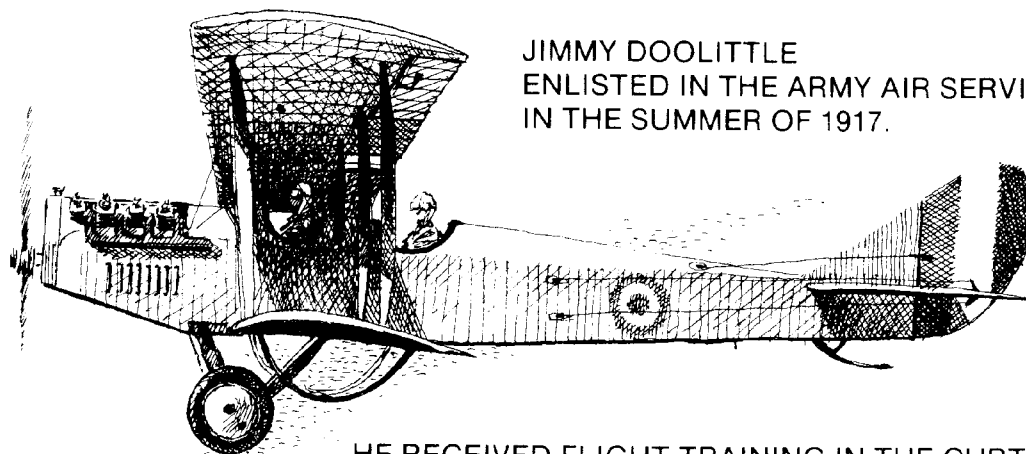
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Teacher



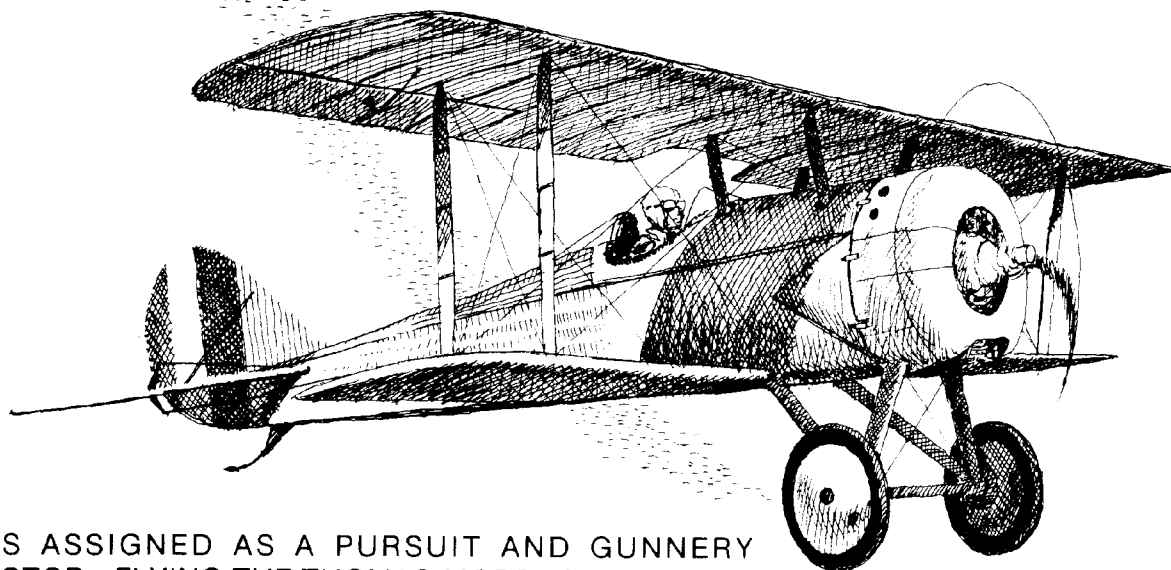
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Principal



JIMMY DOOLITTLE  
ENLISTED IN THE ARMY AIR SERVICE  
IN THE SUMMER OF 1917.

HE RECEIVED FLIGHT TRAINING IN THE CURTISS JN-4 "JENNY."



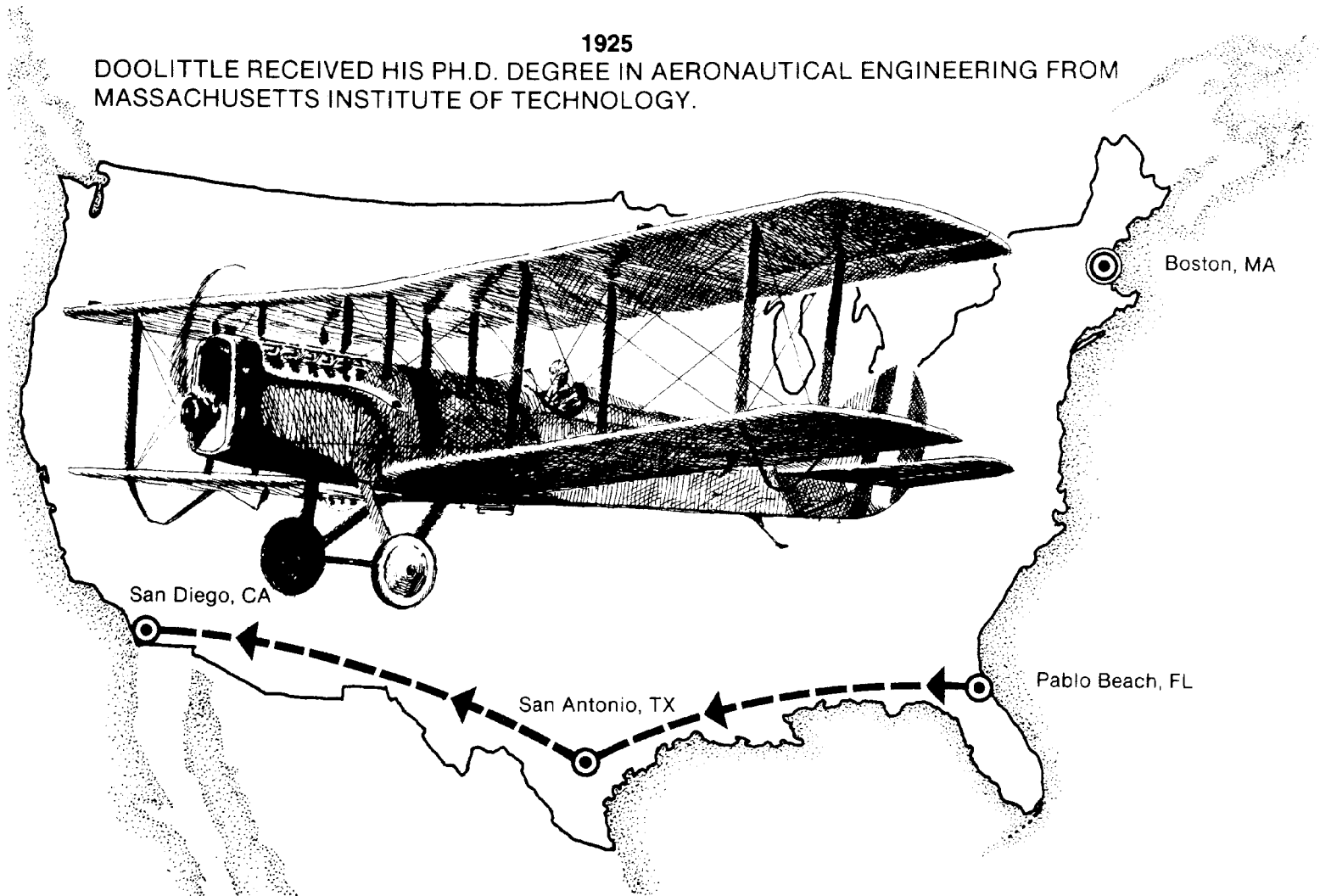
HE WAS ASSIGNED AS A PURSUIT AND GUNNERY  
INSTRUCTOR—FLYING THE THOMAS-MORSE S-4 SCOUT.

**1922**

FLYING A DH-4, HE MADE THE FIRST COAST-TO-COAST FLIGHT IN LESS THAN 24 HOURS—  
FROM PABLO BEACH, FLORIDA, TO SAN ANTONIO, TEXAS, AND THEN ON TO SAN DIEGO,  
CALIFORNIA, IN 22 HOURS 30 MINUTES.

**1925**

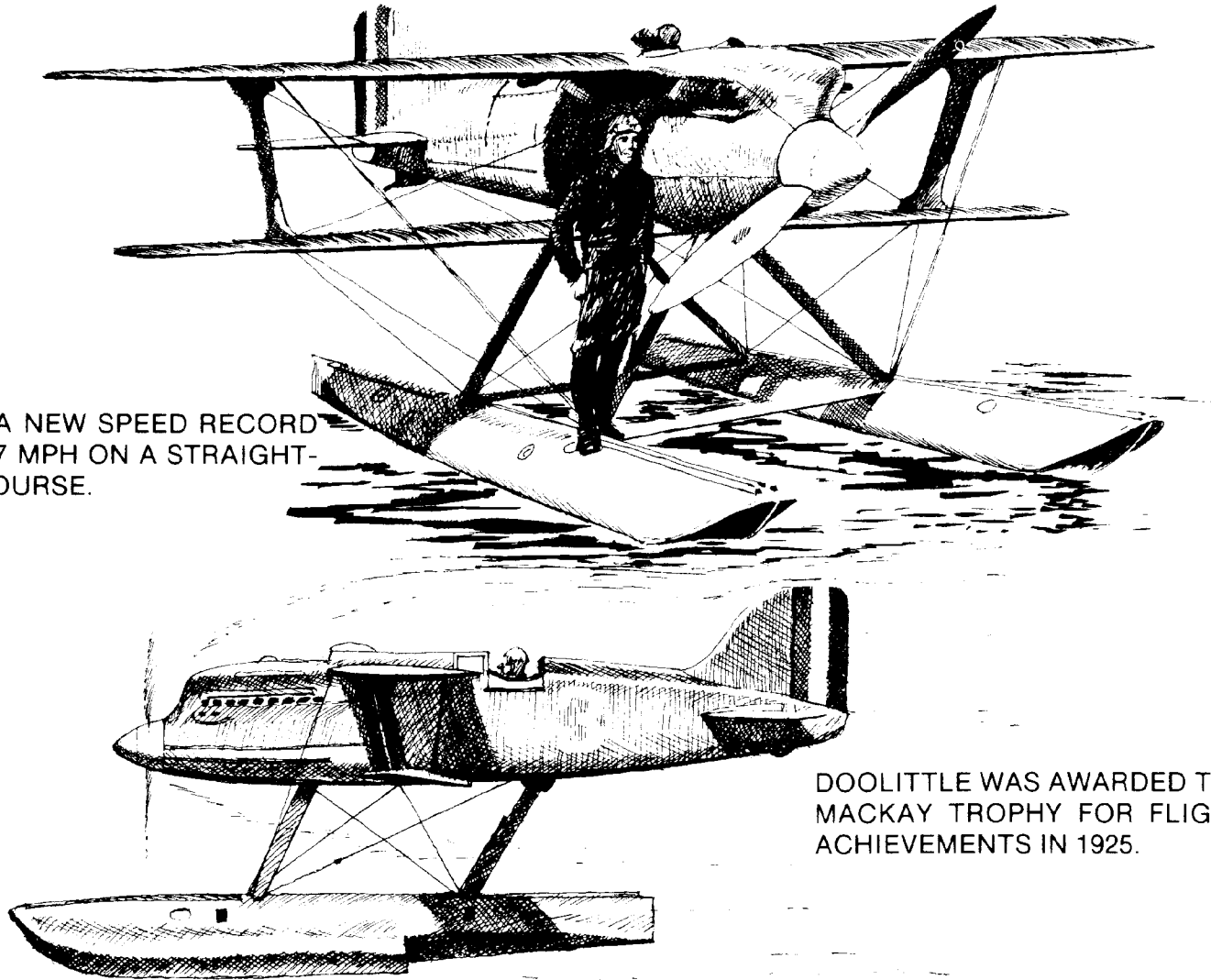
DOOLITTLE RECEIVED HIS PH.D. DEGREE IN AERONAUTICAL ENGINEERING FROM  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY.



## AVIATION AWARDS

JIMMY WON THE SCHNEIDER TROPHY IN 1925 WHILE FLYING A CURTISS R3C-2 RACER AT AN AVERAGE SPEED OF 232.57 MPH.

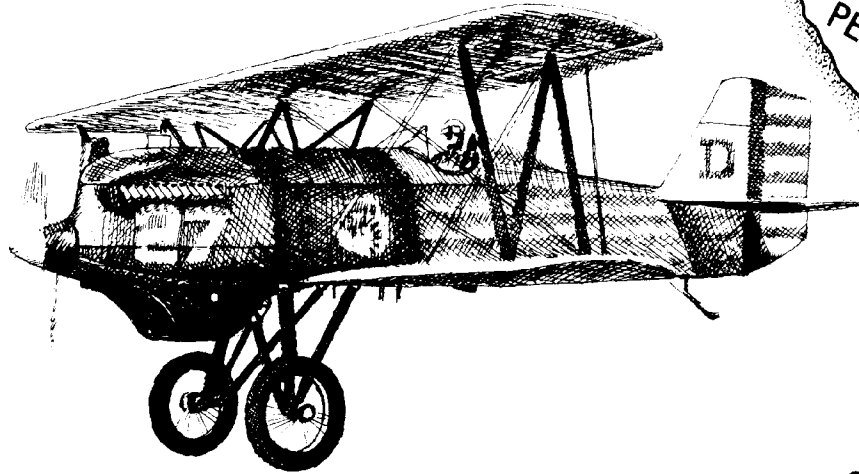
HE SET A NEW SPEED RECORD OF 247.17 MPH ON A STRAIGHT-AWAY COURSE.



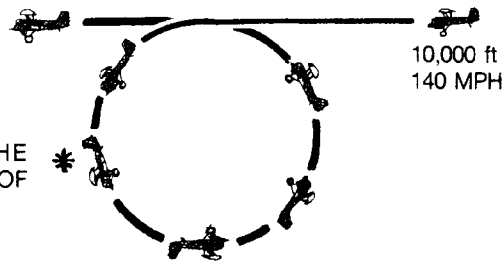
DOOLITTLE WAS AWARDED THE MACKAY TROPHY FOR FLIGHT ACHIEVEMENTS IN 1925.

### 1926-1928

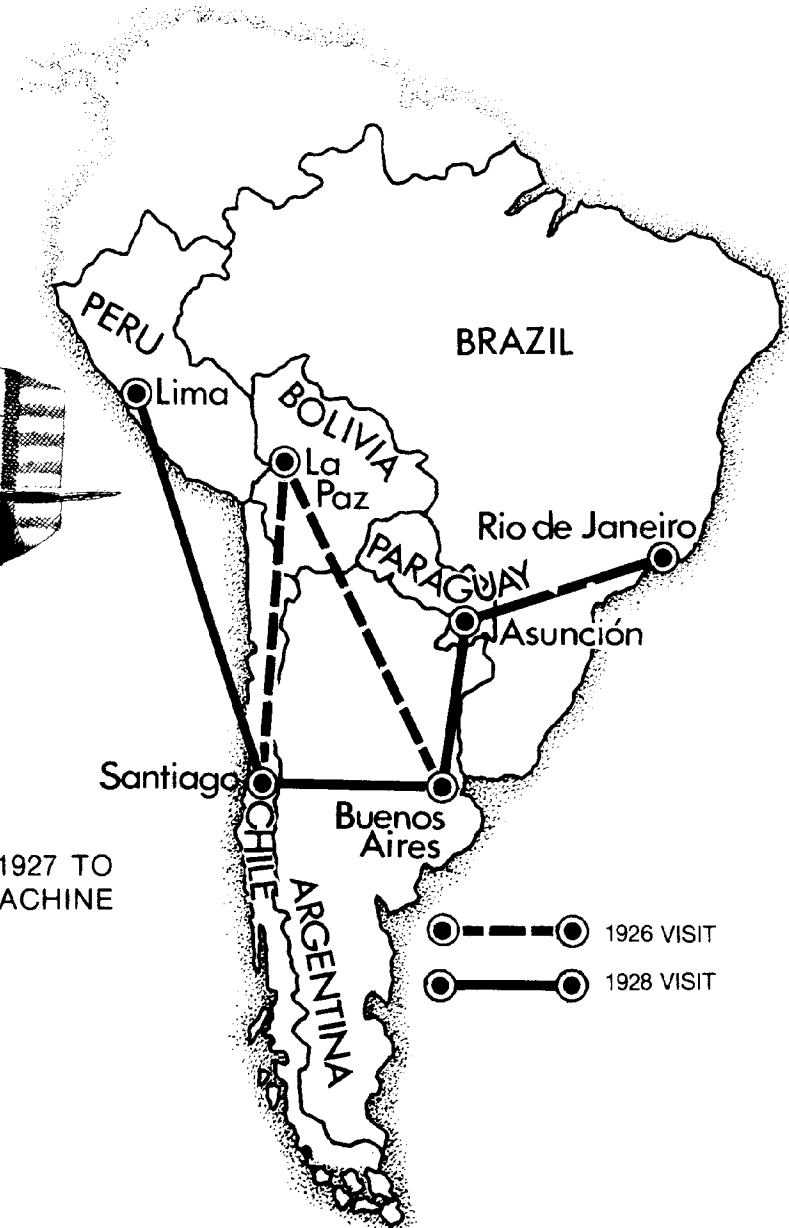
JIMMY FLEW CURTISS P-1 AIRCRAFT TO SOUTH AMERICA TO PROMOTE SALES OF U.S. AIRCRAFT.



HE PERFORMED THE FIRST OUTSIDE LOOP IN 1927 TO DETERMINE THE LIMITS WHICH PILOT AND MACHINE COULD ENDURE.

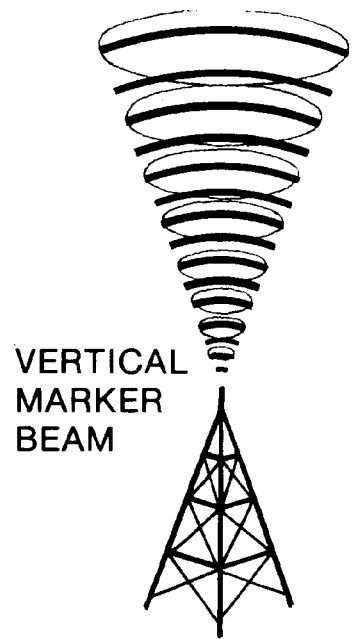


\* 350 MPH; THE DESIGN LIMIT OF THE AIRCRAFT

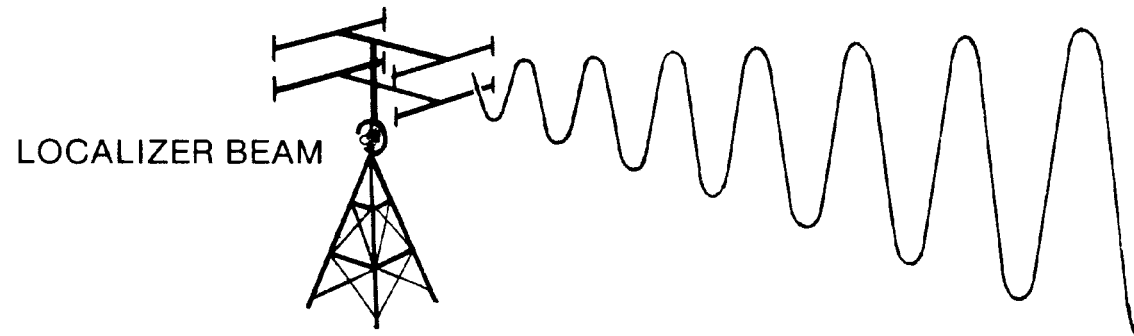




**"BLIND" FLIGHT**  
**RADIO AIDS + INSTRUMENTATION = "BLIND" FLIGHT**

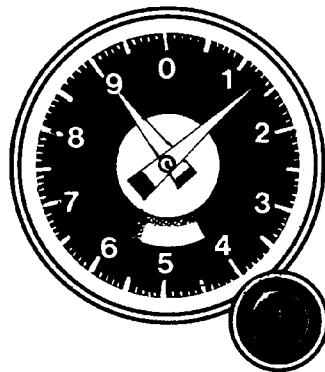


**VERTICAL  
MARKER  
BEAM**

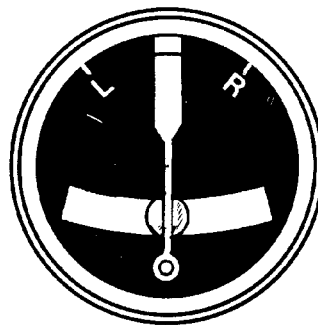


**LOCALIZER BEAM**

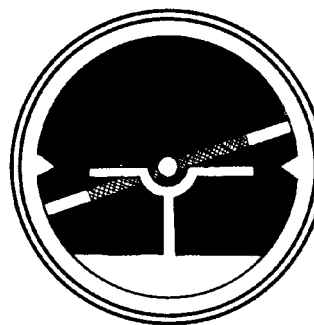
**1. DIRECTED RADIO WAVES (BEAMS OR BEACONS)**



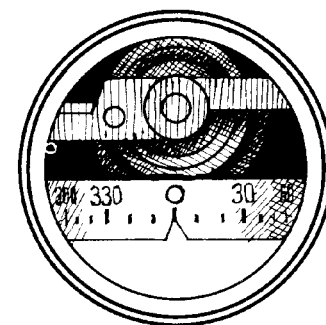
**2. HOLKMAN  
BAROMETRIC  
ALTIMETER**



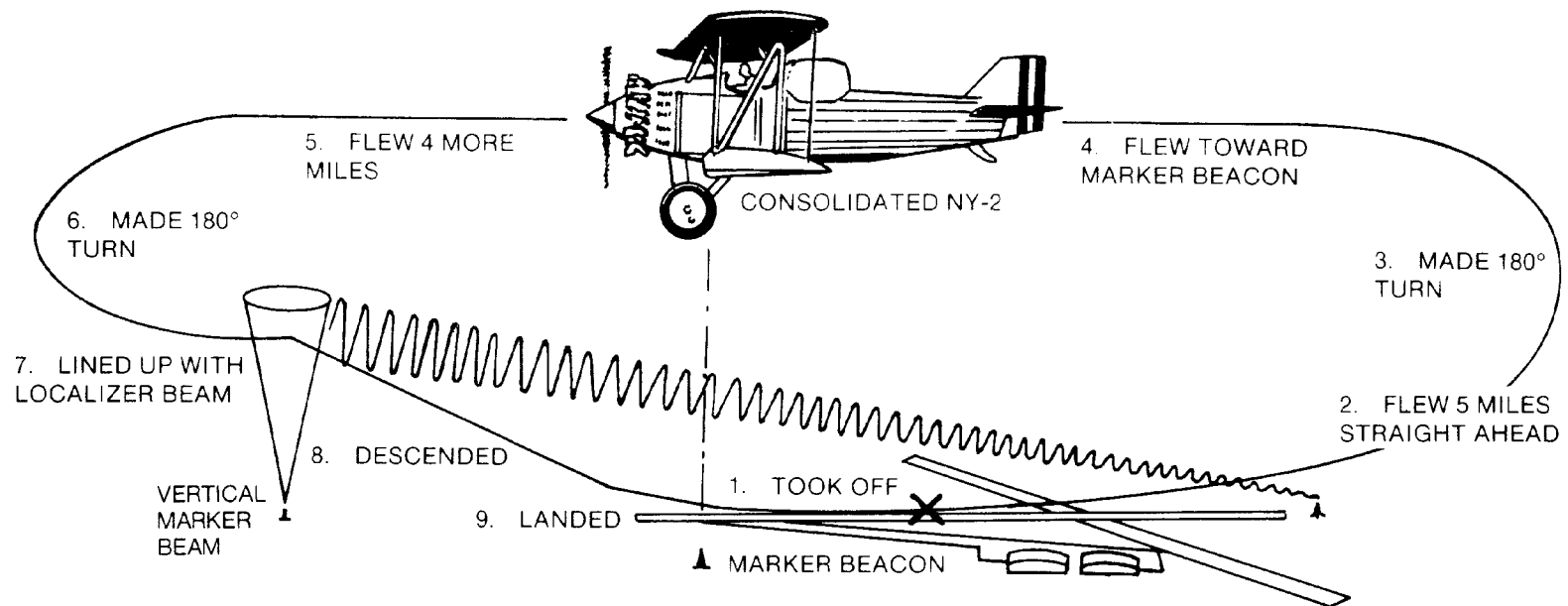
**3. TURN &  
BANK  
INDICATOR**



**4. SPERRY  
GYRO  
HORIZON**

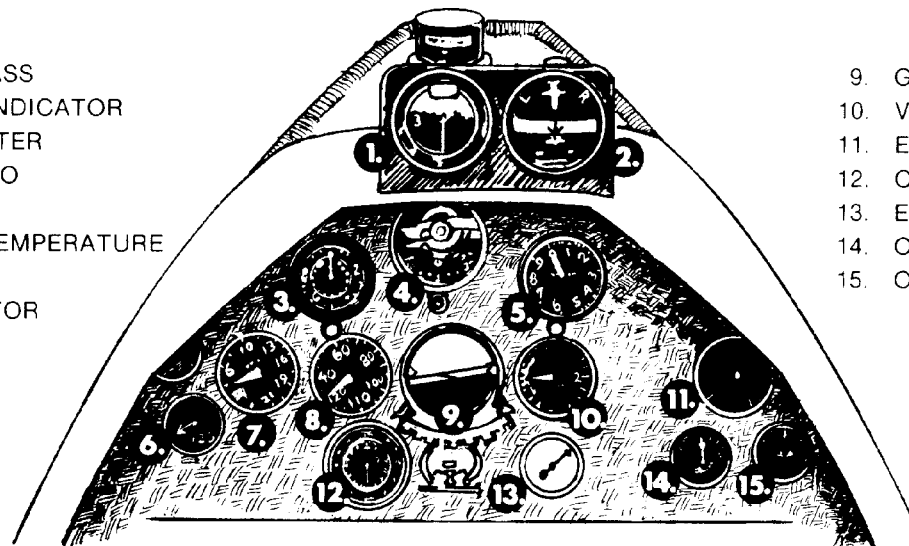


**5. SPERRY  
DIRECTIONAL  
GYRO**



**SEPTEMBER 24, 1929—FIRST "BLIND" FLIGHT FROM TAKEOFF TO LANDING**

1. MAGNETIC COMPASS
2. TURN AND BANK INDICATOR
3. HOLKMAN ALTIMETER
4. DIRECTIONAL GYRO
5. ALTIMETER
6. CYLINDER HEAD TEMPERATURE
7. TACHOMETER
8. AIRSPEED INDICATOR

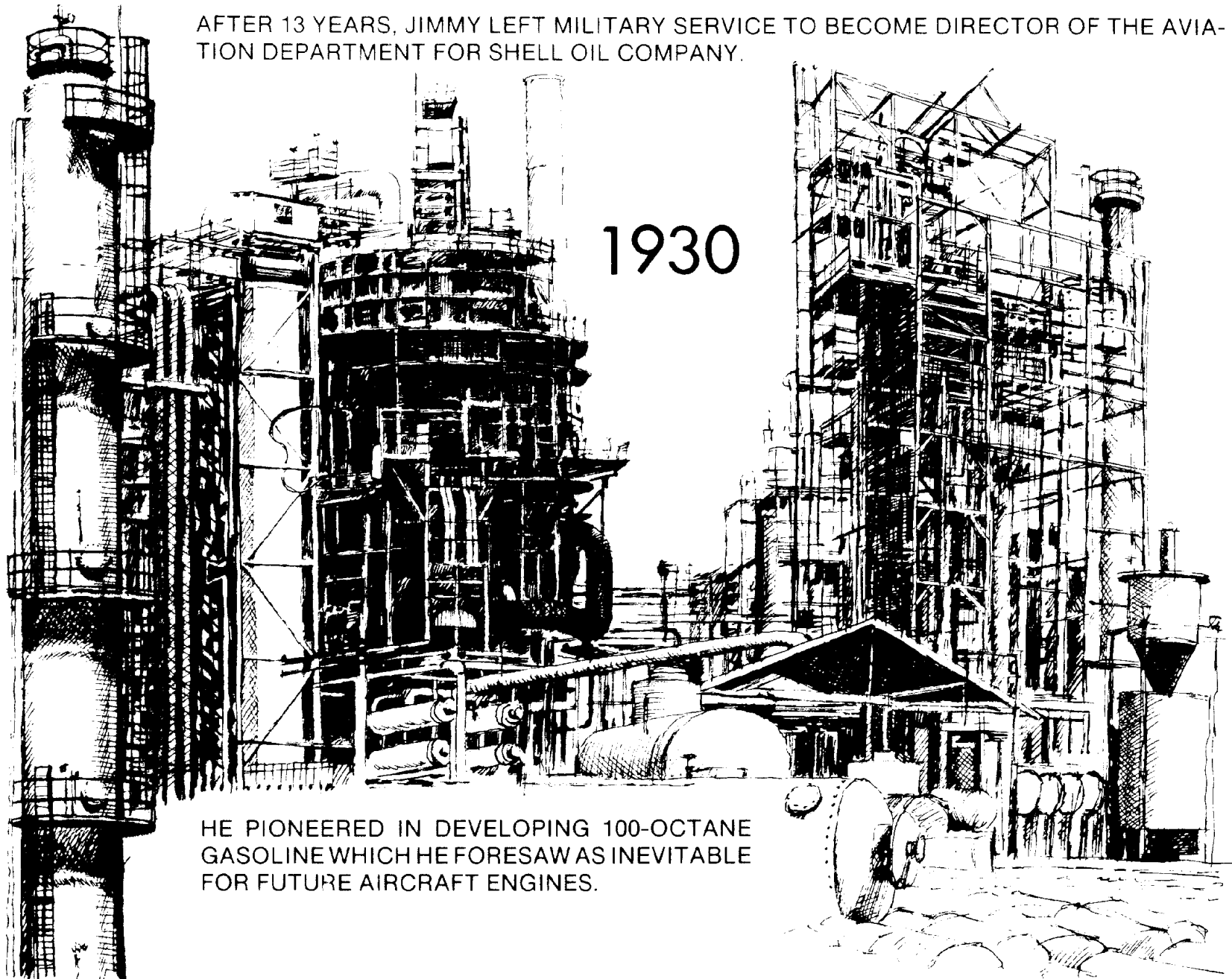


9. GYRO HORIZON
10. VERTICAL SPEED INDICATOR
11. ENGINE INSTRUMENT
12. CHRONOMETER
13. ENGINE INSTRUMENT
14. OIL PRESSURE GAGE
15. OIL TEMPERATURE GAGE

AFTER 13 YEARS, JIMMY LEFT MILITARY SERVICE TO BECOME DIRECTOR OF THE AVIATION DEPARTMENT FOR SHELL OIL COMPANY.

1930

HE PIONEERED IN DEVELOPING 100-OCTANE GASOLINE WHICH HE FORESAW AS INEVITABLE FOR FUTURE AIRCRAFT ENGINES.

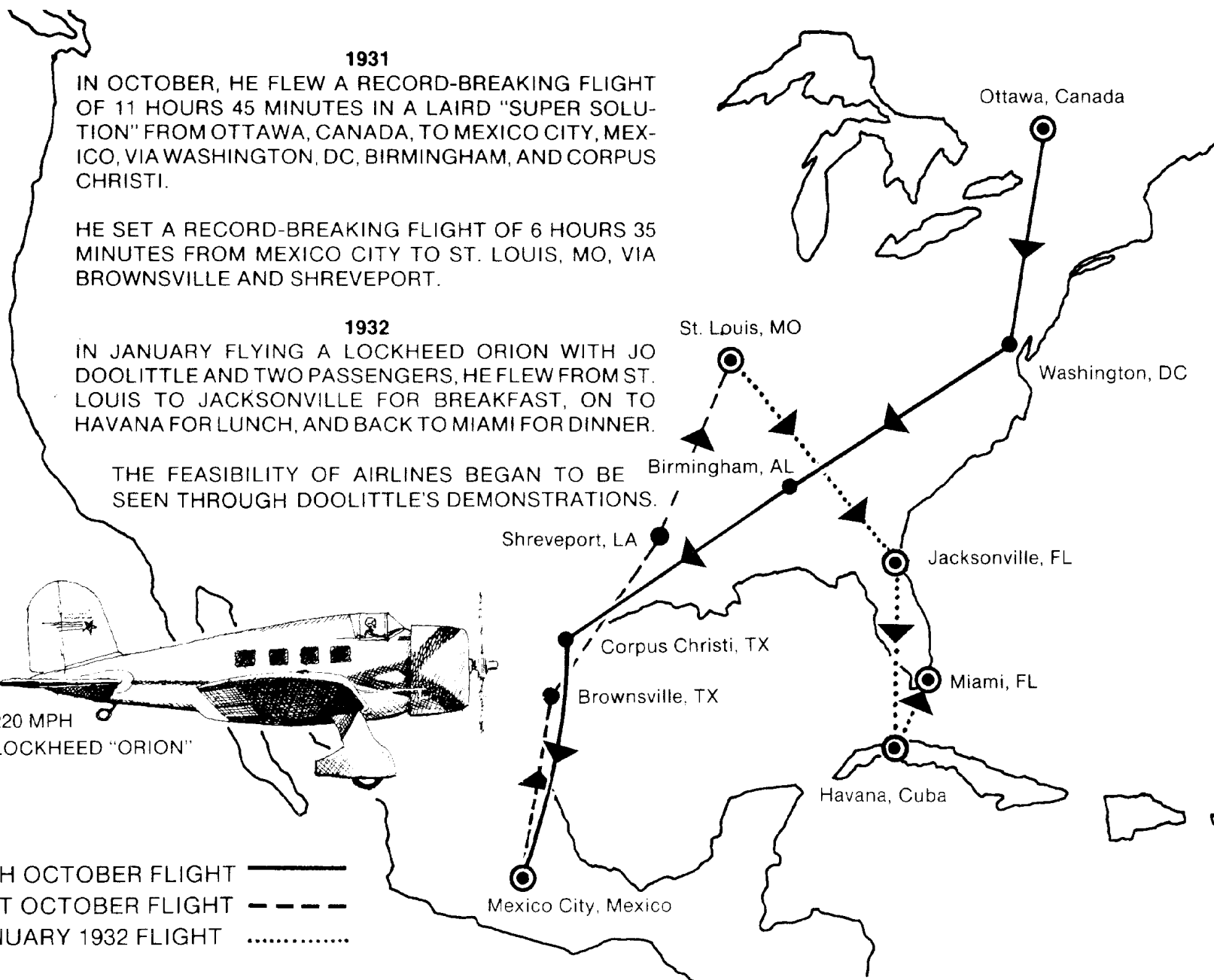


1931

FLYING THE LAIRD "SUPER SOLUTION," DOOLITTLE WON THE BENDIX TROPHY RACE FLYING BETWEEN BURBANK, CALIFORNIA, AND CLEVELAND, OHIO, IN 9 HOURS 10 MINUTES. CONTINUING ON TO NEWARK, NEW JERSEY, HE SET A NEW TRANSCONTINENTAL SPEED RECORD OF 11 HOURS 16 MINUTES.

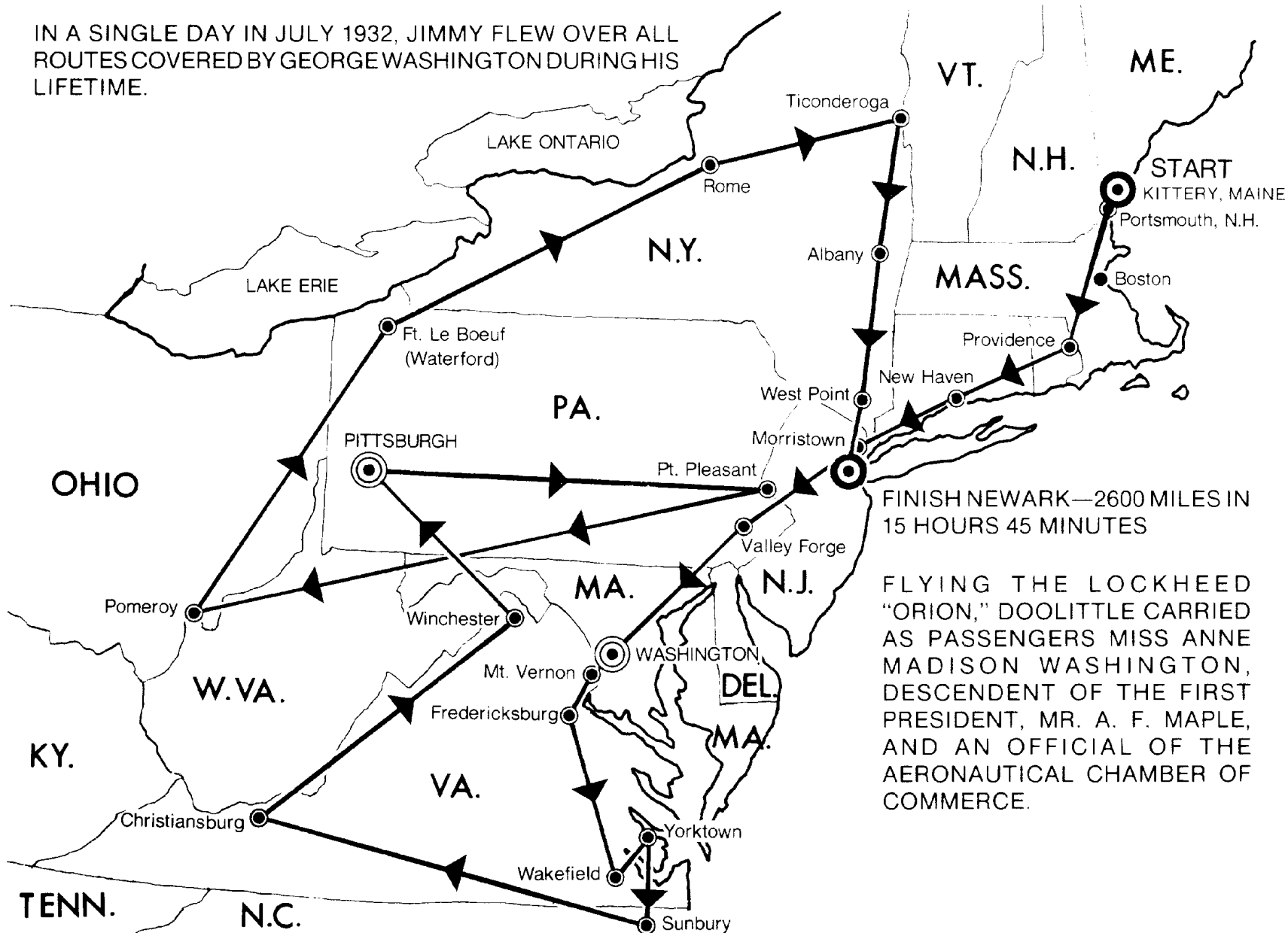


AFTER REMAINING IN NEWARK FOR ONE HOUR, DOOLITTLE FLEW BACK TO CLEVELAND AND THEN TO ST. LOUIS, MISSOURI. HIS TOTAL DISTANCE FOR THE DAY WAS 3,500 MILES.

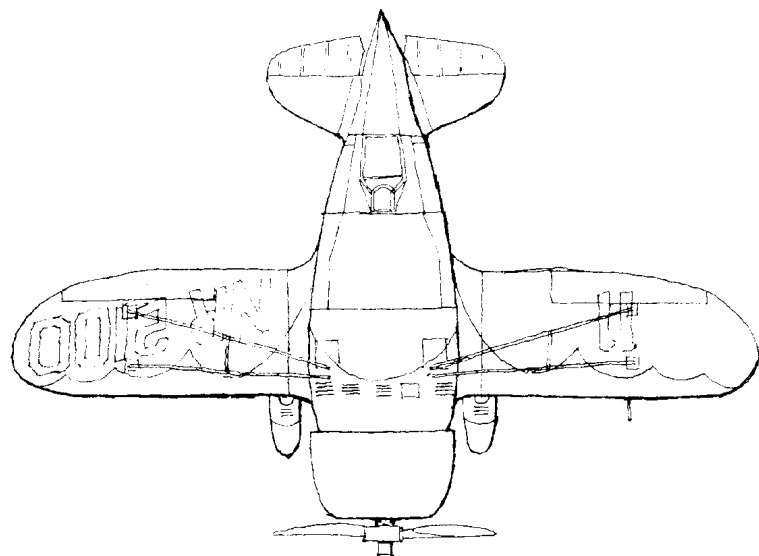


## U.S. POST OFFICE COMMEMORATIVE FLIGHT (157TH ANNIVERSARY)

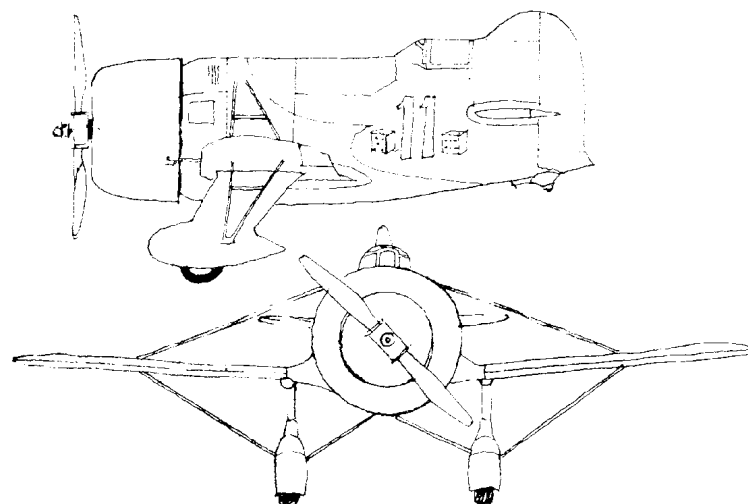
IN A SINGLE DAY IN JULY 1932, JIMMY FLEW OVER ALL ROUTES COVERED BY GEORGE WASHINGTON DURING HIS LIFETIME.



FLYING THE LOCKHEED "ORION," DOOLITTLE CARRIED AS PASSENGERS MISS ANNE MADISON WASHINGTON, DESCENDENT OF THE FIRST PRESIDENT, MR. A. F. MAPLE, AND AN OFFICIAL OF THE AERONAUTICAL CHAMBER OF COMMERCE.

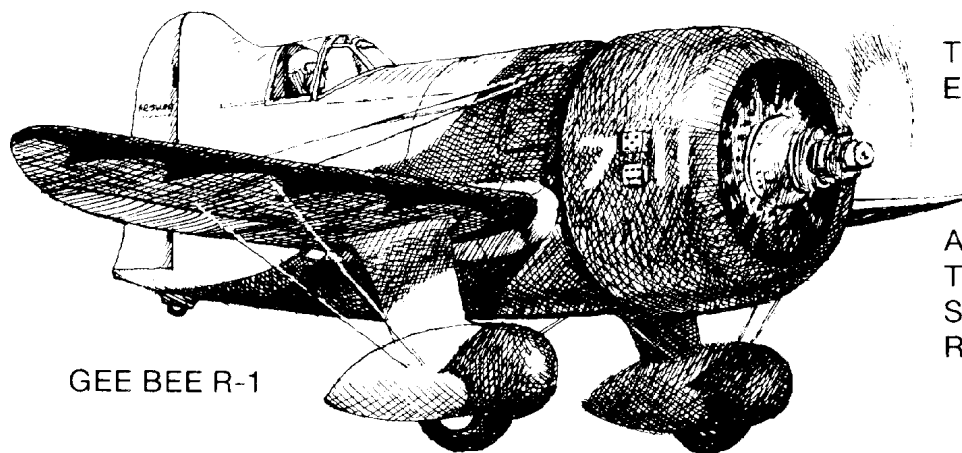


**THE LAST PYLON**



JIMMY WON THE 1932 THOMPSON TROPHY IN A GEE BEE R-1 AT AN AVERAGE SPEED OF 252.686 MPH.

THIS WAS THE "TOUCHIEST" PLANE HE HAD EVER FLOWN.



GEE BEE R-1

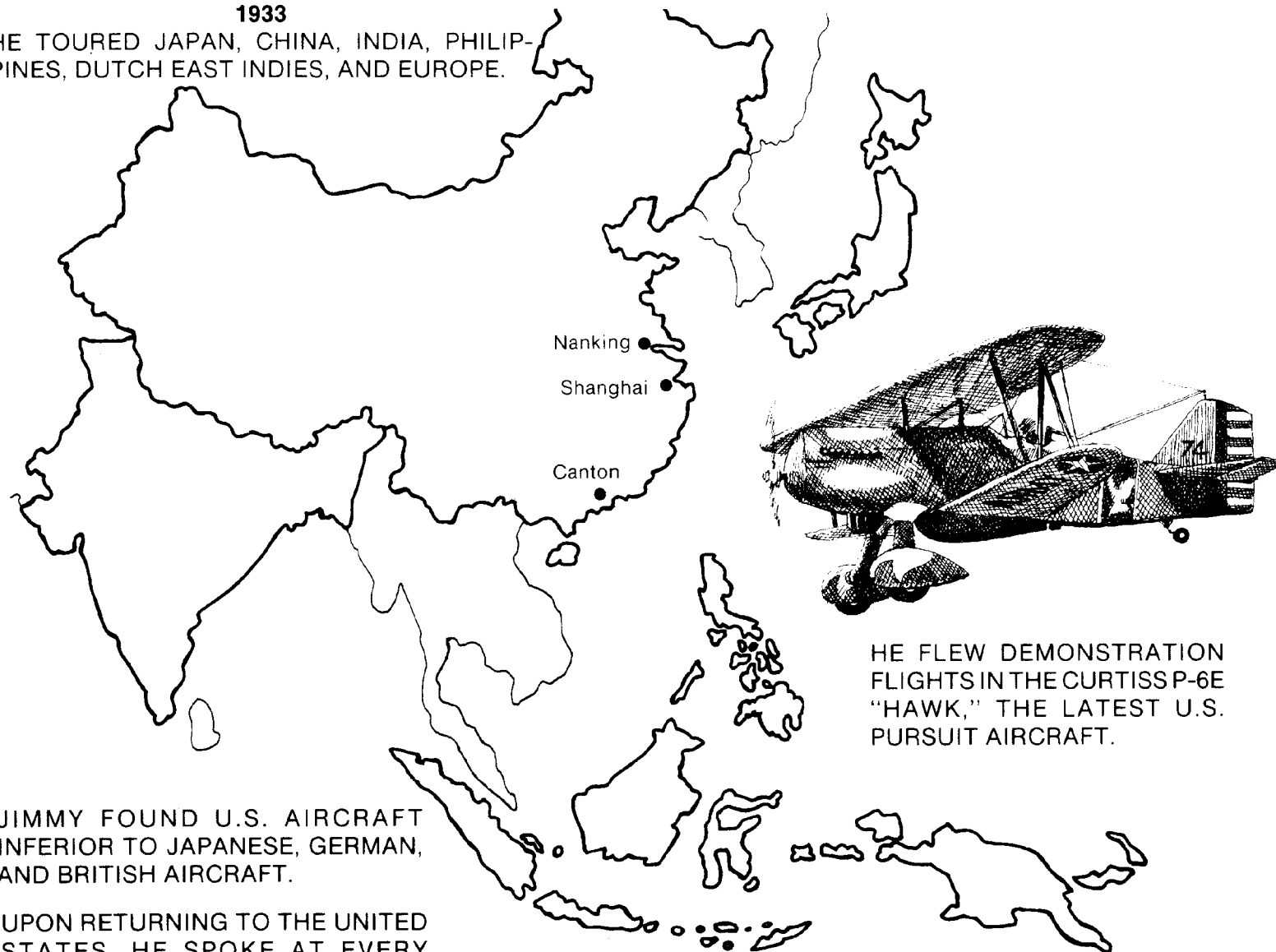
AFTER THE RACE, HE RETURNED THE BORROWED AIRCRAFT TO SPRINGFIELD, MA., NEVER TO RACE AGAIN!



THOMPSON TROPHY

**1933**

HE TOURED JAPAN, CHINA, INDIA, PHILIPPINES, DUTCH EAST INDIES, AND EUROPE.



HE FLEW DEMONSTRATION  
FLIGHTS IN THE CURTISS P-6E  
"HAWK," THE LATEST U.S.  
PURSUIT AIRCRAFT.

JIMMY FOUND U.S. AIRCRAFT  
INFERIOR TO JAPANESE, GERMAN,  
AND BRITISH AIRCRAFT.

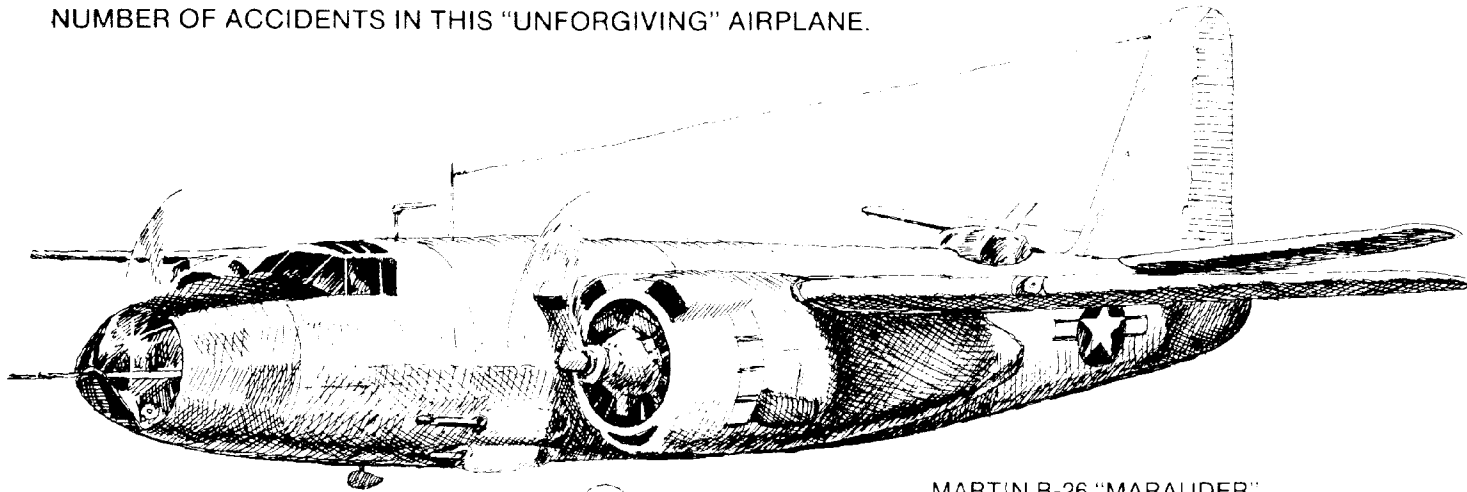
UPON RETURNING TO THE UNITED  
STATES, HE SPOKE AT EVERY  
OPPORTUNITY TO EMPHASIZE THIS  
DEFICIENCY.



1940

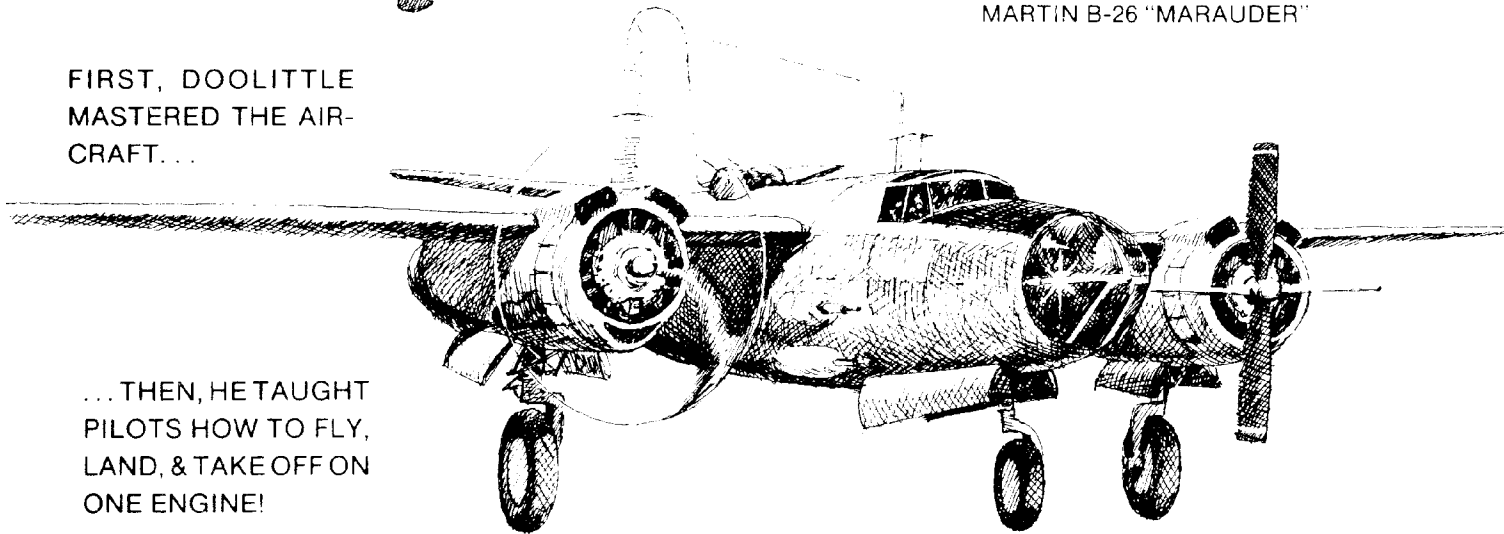
ON JULY 1, JIMMY RETURNED TO ACTIVE DUTY IN THE U.S. ARMY AIR CORPS AS A MAJOR.

HIS FIRST TASK WAS THE "B-26 PROBLEM." PILOTS WERE HAVING AN UNACCEPTABLE NUMBER OF ACCIDENTS IN THIS "UNFORGIVING" AIRPLANE.



MARTIN B-26 "MARAUDER"

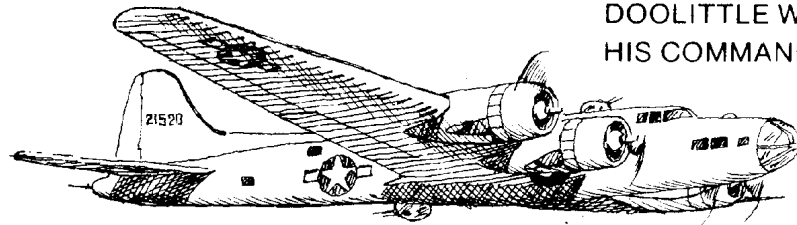
FIRST, DOOLITTLE  
MASTERED THE AIR-  
CRAFT...



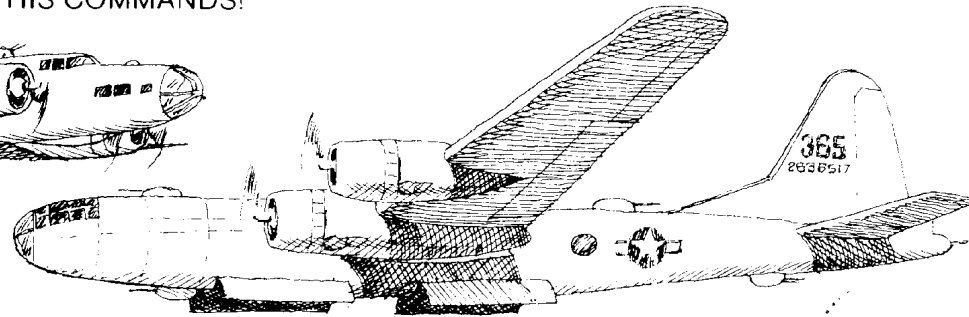
... THEN, HE TAUGHT  
PILOTS HOW TO FLY,  
LAND, & TAKE OFF ON  
ONE ENGINE!

HIS RECOMMENDATION WAS TO CONTINUE PRODUCTION OF THIS AIRCRAFT.

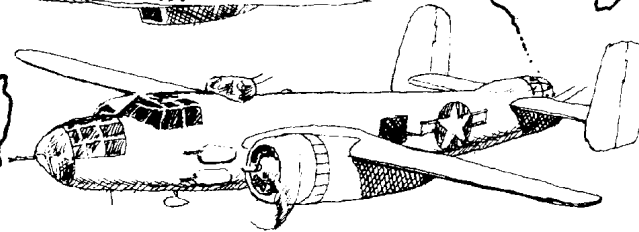
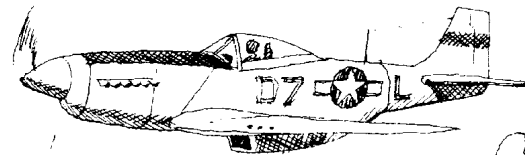
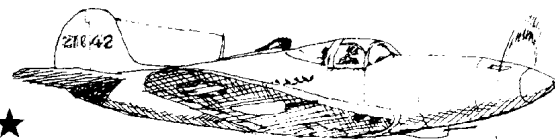
DOOLITTLE WAS A QUALIFIED PILOT OF EVERY AIRCRAFT IN EACH OF HIS COMMANDS!



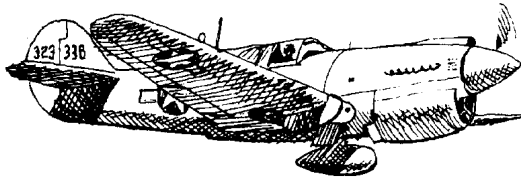
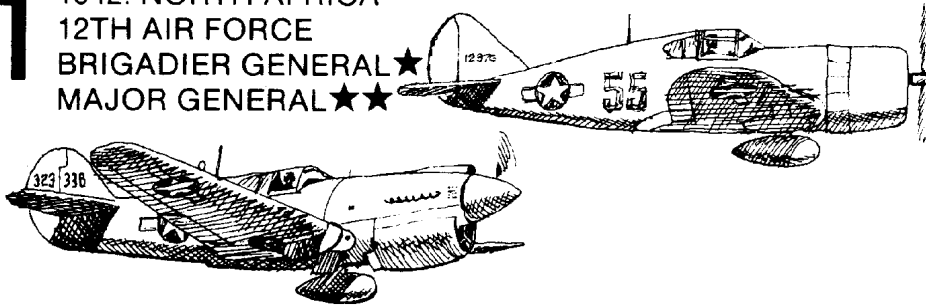
**3** 1944: ENGLAND  
8TH AIR FORCE  
★★★★



**2** 1943: ITALY  
15th AIR FORCE  
LT. GENERAL ★★★★★



**1** 1942: NORTH AFRICA  
12TH AIR FORCE  
BRIGADIER GENERAL ★  
MAJOR GENERAL ★★



**4**

1945:  
PACIFIC  
THEATER,  
OKINAWA  
8TH AIR FORCE  
★★★★

